

REMARKS

Claims 1-30 and 32 are currently pending in the subject application and are presently under consideration. Claims 1, 9, 19, 25, and 30 have been amended as shown at pages 2-6 of the Reply.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claims 1 and 30 Under 35 U.S.C §112

Claims 1 and 30 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1 and 30 have been amended as suggest by the Examiner to address the issues identified in the Office Action. Accordingly, this rejection should be withdrawn.

II. Rejection of Claims 1-4, 7-10, 12-25 and 27-29 Under 35 U.S.C. §102(e)

Claims 1-4, 7-10, 12-25 and 27-29 stand rejected under 35 U.S.C. §102(e) as being anticipated by Ross, *et al.* (US 6,757,590). Applicants' representative respectfully requests that this rejection be withdrawn for at least the following reasons Ross, *et al.* fails to teach or suggest all features of the claimed subject matter.

A single prior art reference anticipates a patent claim only if it expressly or inherently describes each and every limitation set forth in the patent claim. *Trintec Industries, Inc., v. Top-U.S.A. Corp.*, 295 F.3d 1292, 63 U.S.P.Q.2D 1597 (Fed. Cir. 2002); *See Verdegall Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the ... claim. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The subject claims relate to dynamic distributed energy management by control of loads and optimization of energy. The system is scalable as addition of new components (load controllers, computers, machines etc.) can be recognized at any time. When demand will exceed a threshold level, then the load controllers collaborate to decide which loads to connect and shed.

Moreover shedding and connecting of the load is also similarly facilitated by categorization under class. In particular, independent claim 1 recites *a plurality of loads associated with a system, wherein at least one subset of the plurality of loads is a member of a class, wherein members of the class are assigned to the class based upon a requirement that all members of the class must be connected to or shed from an energy supply in unison; all members of a class are connected to the energy supply if connecting the entire class would not bring total system demand above an optimum level, wherein total system demand is the total energy demand for all loads connected to the energy supply.* When a load can be connected to a power supply, connecting all of the members of the load's class helps to avoid an impractical or dangerous condition in case the load is related to other loads that are part of a larger machine process. For example, if two liquid containers feed an inline mixing process and the pump from one of the containers is going to be connected, the pump from the other container should also be connected. Making both pumps members of a class facilitates this objective. Likewise, class membership applies to shedding loads, whereby if a load is going to be shed from the power supply all members of its class will also be shed to prevent systemwide issues.

Ross, *et al.* does not teach or suggest such aspects of the subject claims. The cited reference is concerned with matching power demand to fuel cell capacity when power from the primary utility is reduced or offline. Ross, *et al.* does not consider the consequences of shedding or adding loads that may be related to other loads under a particular class. The cited reference discloses grouping of loads, but only under a simple prioritization, such as high, medium, and low, wherein the priority for each load is established independent of each other. The loads are then shed, potentially as a group, when power demand exceeds capacity. Ross, *et al.* is silent regarding identifying any critical relationships between loads that require that the loads be connected or shed in unison in order to establish their class membership. Furthermore, the cited reference only discloses shedding loads as a group, not connecting them as a group. As such, Ross, *et al.* fails to teach or suggest a plurality of loads associated with a system, wherein at least one subset of the plurality of loads is a member of a class, wherein members of the class are assigned to the class based upon a requirement that all members of the class must be at least one of connected to or shed from an energy supply in unison; all members of a class are connected to the energy supply if connecting the entire class would not bring total system demand above an optimum level, wherein total system demand is the energy demand for all loads connected to the

energy supply.

Moreover, independent claim 9 (and similarly independent claims 19, and 25) recite *a multitude of networked load controllers associated with the plurality of machines, wherein the controllers collaborate and execute an optimization algorithm to determine how a load should be shed across the plurality of machines, wherein the load that is shed is a member of a class and all members of the class are also shed, wherein members of the class are assigned to the class based upon a requirement that all members of the class must be connected to or shed from an energy supply in unison*. As discussed above, Ross, *et al.* fails to teach assignment to a class based upon a relationship between loads that requires connecting or shedding the loads from a power supply in unison.

In view of the foregoing, applicants' representative respectfully submits that Ross, *et al.* fails to teach or suggest all limitations of applicants' invention as recited in independent claims 1 9, 19, and 25 (and claims 2-4, 7, 8, 10, 12-18, 20-24, and 27-29 that depend there from), and thus fails to anticipate the subject claims. Thus, this rejection should be withdrawn.

III. Rejection of Claims 5 and 6 Under 35 U.S.C. §103(a)

Claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ross, *et al.* It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Ross, *et al.* does not teach each and every element of the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claim 5 and 6 depend from independent claim 1. As noted *supra*, Ross, *et al.*, does not teach or suggest *a plurality of loads associated with a system, wherein at least one subset of the plurality of loads is a member of a class, wherein members of the class are assigned to the class based upon a requirement that all members of the class must be connected to or shed from an energy supply in unison; all members of a class are connected to the energy supply if connecting the entire class would not bring total system demand above an optimum level, wherein total system demand is the energy demand for all loads connected to the energy supply* as recited in independent claim 1.

In view of at least the foregoing discussion, applicant's representative respectfully submits that Ross, *et al.* fails to teach or suggest all limitations of applicants' invention as recited in independent claim 1 (and claims 5 and 6 that respectfully depend there from), and thus fails to make obvious the subject claimed invention. As such, withdrawal of this rejection is respectfully requested.

IV. Rejection of Claims 11 and 26 Under 35 U.S.C. §103(a)

Claims 11 and 26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ross, *et al.* as applied to the claims above, and further in view of McKay, *et al.* (US 6,345,501). It is respectfully submitted that this rejection should be withdrawn for at least the following reasons. Ross, *et al.*, in view of McKay, *et al.* does not teach each and every element of applicants' invention as recited in the subject claims.

Claim 11 and 26 depends from independent claims 9 and 25 respectively. As noted above, Ross, *et al.* does not teach or suggest each and every element of the subject invention as recited in these independent claim, and McKay, *et al.* fails to make up for the aforementioned deficiencies of Ross, *et al.* McKay, *et al.* discloses a variable speed hydraulic motor that can be placed into different operating modes in order to support power consumption requirements. However, McKay, *et al.* is silent regarding class memberships for loads or a requirement that loads must be connected to or shed from an energy supply in unison. Therefore, Ross, *et al.* and McKay, *et al.*, alone or in combination, fails to teach or suggest *members of the class are assigned to the class based upon a requirement that all members of the class must be connected to or shed from an energy supply in unison.*

In view of at least the foregoing discussion, applicant's representative respectfully submits that Ross, *et al.* in view of McKay, *et al.* fails to teach or suggest all limitations of applicants' invention as recited in independent claims 9 and 25 (and claims 11 and 26 that respectfully depend there from), and thus fails to make obvious the subject claimed invention. Accordingly, withdrawal of this rejection is respectfully requested.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [ALBRP327US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,
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